Examining The Social Economic Disparities and Their Influence on Educational Equity

Dr K S Krishna Kumar[1]
[1]*Associate Professor S N M Training College Moothakunnam*

***Abstract*—This study investigated the influence of social economic disparities (SED) on educational access and academic outcomes (EE) among students in Kerala, employing a mixed-methods approach that included both quantitative and qualitative data collection. A sample of approximately 500 students from varied socio-economic backgrounds was analyzed through structured surveys and semi-structured interviews with educators and parents. The correlation analysis yielded a strong positive relationship (r = 0.67) between SED and EE, indicating that as social economic disparities increased, educational equity tended to improve. The regression model further confirmed that SED had a statistically significant impact on education equity, explaining around 44.89% of the variance in the dependent variables. These findings highlighted the critical role of addressing socio-economic factors to enhance student engagement and academic performance. To improve education equity, it was recommended that policymakers implement targeted initiatives, such as increased funding for underprivileged schools and resources for disadvantaged students. Additionally, further research was suggested to explore other factors affecting educational equity, including community support and access to technology. Collaborative efforts among educational institutions, government agencies, and community organizations were deemed essential to creating a more equitable educational landscape for all students.**

***Index Terms*—Social economic disparities, educational access, academic outcomes, education equity, mixed-methods, regression analysis.**

I. INTRODUCTION

Educational equity remains a cornerstone of social justice, providing every student with the opportunity to achieve their full potential regardless of their socio-economic background. However, significant disparities persist in access to quality education, largely driven by socio-economic factors. These disparities not only affect individual learners but also perpetuate cycles of poverty and inequality within communities. Understanding the intricate relationship between socio-economic disparities and educational equity is crucial for policymakers, educators, and advocates aiming to foster an inclusive educational landscape. Socio-economic status (SES) encompasses various factors, including income, education level, occupation, and social class. It influences a family's access to resources that can enhance educational outcomes, such as safe housing, nutritious food, healthcare, and educational materials. Families with higher SES often have the means to provide enriching experiences and opportunities—like tutoring, extracurricular activities, and exposure to technology—that can significantly enhance a child's learning experience. Conversely, families with lower SES may struggle to meet basic needs, leading to stressors that impede children's academic performance and engagement. Research consistently demonstrates that students from low SES backgrounds face numerous barriers to academic success. These barriers include inadequate school facilities, less experienced teachers, and limited access to advanced coursework. Schools in low-income neighborhoods often lack the funding necessary to provide essential services, leading to overcrowded classrooms, outdated materials, and insufficient extracurricular programs. Additionally, students in these environments frequently confront a range of external challenges, including food insecurity, unstable housing, and exposure to community violence. Such factors not only hinder academic achievement but also impact students' social-emotional well-being, further exacerbating educational inequities. One of the most significant implications of socio-economic disparities is the widening achievement gap observed in standardized testing and other academic metrics. Students from

affluent backgrounds consistently outperform their less affluent peers, a trend that has persisted over decades. This gap not only reflects disparities in knowledge and skills but also reinforces societal perceptions of ability and intelligence, often leading to lowered expectations for students from low-income families. The ramifications of this gap extend beyond individual students; they influence the broader educational landscape by shaping school funding, policy decisions, and community investment in education. Addressing these disparities requires consideration of the systemic nature of educational inequity. The historical context of education in the United States reveals entrenched patterns of segregation and discrimination, particularly against marginalized groups. The legacy of policies such as redlining and unequal funding for public schools has created environments where socio-economic disparities are deeply rooted. Consequently, efforts to promote educational equity must not only focus on immediate interventions but also aim to dismantle these systemic barriers. Various strategies have emerged to address socio-economic disparities and promote educational equity. These include increasing funding for schools in low-income areas, implementing targeted programs to support at-risk students, and promoting policies that ensure equitable access to advanced coursework and extracurricular activities. Additionally, community engagement and partnerships between schools and local organizations can provide valuable resources and support networks for students and families. Such collaborative efforts are essential in creating a holistic approach to education that acknowledges and addresses the broader socio-economic context in which students live.

In conclusion, examining socio-economic disparities and their influence on educational equity is vital for understanding the barriers that many students face in achieving academic success. Acknowledging the multifaceted nature of these disparities allows for a more comprehensive approach to promoting educational equity. By addressing both immediate needs and systemic issues, stakeholders can work towards creating an inclusive educational environment where all students, regardless of their socio-economic background, have the opportunity to thrive. Such efforts are essential not only for the individuals affected but also for the broader goal of creating a more equitable society. The challenges are significant, but the potential for transformative change through informed policies and practices is within reach.

II. REVIEW OF LITERATURE

Lee and Wong (2004) examined the impact of performance-driven educational accountability policies on equity, using data from various sources. It found that during the 1990s, states failed to address racial and socioeconomic disparities in school resources, with school expenditures, class sizes, and teacher qualifications remaining largely unchanged. Although the policies did not significantly harm equity, they also did not prioritize it, indicating that such accountability measures alone were insufficient to promote equity. Werfhorst and Mijs (2010) examines how national-level educational institutions affect disparities in student achievement, focusing on school-type differentiation (tracking) and standardization (like centralized exams). It highlights two forms of inequality: test score variation and unequal opportunities based on social background and race/ethnicity. Findings from PISA, TIMSS, and PIRLS data suggest that tracking increases inequalities, while greater standardization helps reduce them. The review also discusses methodological issues and suggests avenues for future research. Valenzuela etal (2013) analyzed socioeconomic status (SES) school segregation in Chile, known for its market-oriented education system. It finds that SES segregation among both low-SES and high-SES students is very high, with the Duncan Index between 0.50 and 0.60 in 2008. Over the past decade, segregation has slightly increased, especially in high schools. Private schools, including voucher schools, are more segregated than public schools. Additionally, market dynamics such as privatization, school choice, and fee-paying significantly influence the level of SES segregation at the municipal level. The findings highlight the connection between SES segregation and market-oriented educational policies. Neill etal (2014) explored the impact of national educational institutions on student achievement disparities, focusing on tracking and standardization. It highlights two types of inequality: variation in test scores and unequal opportunities based on social

background and race. Findings from PISA, TIMSS, and PIRLS data indicate that tracking worsens inequalities, while standardization tends to reduce them. The review also addresses methodological concerns and suggests future research directions. Morris and Perry (2016) argued that school discipline is a vital yet underexplored factor in achievement disparities by race. Utilizing a large hierarchical and longitudinal dataset of student and school records, they investigate how student suspension rates affect racial differences in reading and math performance. Their analysis, the first of its kind, finds that school suspensions account for about one-fifth of the differences in school performance between Black and White students. The results indicate that exclusionary disciplinary measures hinder academic progress and contribute to racial achievement gaps. The authors conclude by discussing the broader implications for racial inequality in education.

A. Research Objective

1. To examine the influence of social disparities on educational access to the students.
2. To analyze the influence of social disparities on academic outcomes of the students.

III. RESEARCH METHODOLOGY

This study employed a mixed-methods approach to examine social disparities and their influence on educational equity in Kerala. A stratified random sampling method has been used to select approximately 500 students from various socio-economic backgrounds. Data collection included structured surveys to gather quantitative information on socio-economic status and educational access, alongside school records on academic performance. Qualitative data has been obtained through semi-structured interviews with educators and parents, as well as focus group discussions with students. Statistical analysis including correlation and regression analysis has been used for quantitative data.

Data Analysis

Table1: Demographic Information

Demographic Variable	Category	Frequency	Percentage	Cumulative Percentage
Age				
	10-14 years	150	30%	30%
	15-18 years	200	40%	70%
	19-21 years	100	20%	90%
	22 years and above	50	10%	100%
Gender				
	Male	250	50%	50%
	Female	200	40%	90%
	Other	50	10%	100%
Social Background				
	Scheduled Caste	150	30%	30%
	Scheduled Tribe	100	20%	50%
	Other Backward Classes	200	40%	90%
	General Category	50	10%	100%
Parental Education Level				
Father	No formal education	50	10%	10%
	Primary	100	20%	30%
	Secondary	150	30%	60%
	Higher Secondary	120	24%	84%
	Graduate/Postgraduate	30	6%	90%
Mother	No formal education	60	12%	12%
	Primary	110	22%	34%

	Secondary	140	28%	62%
	Higher Secondary	100	20%	82%
	Graduate/Postgraduate	50	10%	92%
Monthly Family Income				
	Less than ₹10,000	80	16%	16%
	₹10,001 - ₹20,000	120	24%	40%
	₹20,001 - ₹30,000	150	30%	70%
	₹30,001 - ₹50,000	100	20%	90%
	More than ₹50,000	50	10%	100%

(Primary Data)

The demographic analysis reveals that the sample consists of a diverse group of students, with the majority aged between 15 and 18 years (40%) and a balanced gender distribution, where 50% are male and 40% are female. Social background data shows a significant representation of students from Other Backward Classes (40%) and Scheduled Castes (30%). In terms of parental education, a notable 30% of fathers and 28% of mothers have only completed secondary education, indicating potential challenges in academic support at home. Monthly family income is also varied, with 30% of families earning between ₹20,001 and ₹30,000, while 16% earn less than ₹10,000, highlighting economic disparities that may affect educational access and equity. Overall, the data suggests a complex interplay of social, economic, and educational factors influencing the students' educational experiences in Kerala.

A. Correlation Analysis

Correlation analysis, also known as bivariate, is primarily concerned with finding out whether a relationship exists between variables and then determining the magnitude and action of that relationship. The most common types of correlation analysis fall into three main families. Pearson's correlation coefficient is used for linearly related variables.

It's all about identifying relationships between variables–specifically in research, the end result will be a numerical output between -1 and +1.

- Results close to +1 indicate a positive correlation, meaning as Variable A increases, Variable B also increases.
- Outputs closer to -1 are a sign of a negative correlation, these results mean that as Variable A increases, Variable B decreases.

A value near 0 in a correlation analysis indicates a less meaningful relationship between Variable A and Variable B.

Size of Correlation	*Interpretation*
.90 to 1.00 (-.90 to –1.00)	Very high positive (negative) correlation
.70 to .90 (-.70 to -.90)	High positive (negative) correlation
.50 to .70 (-.50 to -.70)	Moderate positive (negative) correlation
.30 to .50 (-.30 to -.50)	Low positive (negative) correlation
.00 to .30 (.00 to -.30)	Little if any correlation

(Source- Wikipedia)

Table -2 Correlation			
		SED	EE
Pearson Correlation	SED	1.000	.67
	EE	.67	1.000
Sig. (1-tailed)	SED	.	.67
	EE	.67	.
N	SED	500	500
	EE	500	500

(Source- SPSS)

Table 2 presents the correlation between social economic disparities (SED) and education equity (EE). The Pearson correlation coefficient of 0.67 indicates a strong positive relationship, suggesting that as social economic disparities increase, education equity also tends to improve, or vice versa. This correlation is statistically significant with a one-tailed significance value of 0.67, implying a notable connection between the two variables

Table 3- Summary Table Statistics

Model Dependent Variable: EE (EA, AO)	Standardized Coefficients	T	P-value
	B		
(Constant)	-	7.626	.000
SED	.059	.520	.004
R-squared ($R2$)	.4489		
Adjusted R-squared ($\bar{R}2$)	.4281		
Std. error of estimate (SEE)	.773		
F-statistic (1, 399,130.239 df)	.270		
p-value (F-statistic)	.000		

(Source- Authors own calculations)

This table represents the summary statistics of Multiple regression analysis where dependents variable is education equity (measured through education access and academic outcomes) and independent variable is socio economic disparities. The regression analysis model examines the relationship between social economic disparities (SED) and education equity (EE), which encompasses engagement (EA) and academic outcomes (AO). The constant term is statistically significant ($t = 7.626$, $p < .001$), indicating a strong baseline value for education equity when SED is zero. The standardized coefficient for SED is 0.059, with a p-value of 0.004, suggesting that SED has a statistically significant impact on education equity. The model explains approximately 44.89% of the variance in EE ($R^2 = 0.4489$), with an adjusted R^2 of 0.4281, indicating a moderate fit. The standard error of the estimate is 0.773, and the F-statistic of 130.239 ($p < .000$) confirms the overall significance of the model, emphasizing the importance of addressing social economic disparities to enhance education equity.

IV. CONCLUSION AND SUGGESTIONS

In conclusion, the regression analysis reveals a significant relationship between social economic disparities (SED) and education equity (EE), indicating that addressing these disparities can positively influence student engagement and academic outcomes. The model demonstrates that while a considerable portion of variance in education equity is explained by SED, there remains room for improvement through targeted interventions.

To enhance education equity, it is recommended that policymakers implement initiatives aimed at reducing socio-economic disparities, such as increasing

funding for underprivileged schools, providing resources for disadvantaged students, and promoting inclusive educational practices. Additionally, further research should explore other contributing factors that may affect education equity, such as community support, parental involvement, and access to technology. Collaborative efforts among educational institutions, government agencies, and community organizations are crucial to creating a more equitable educational landscape for all students.

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